

### REMARKS

By this Amendment new claims 31-34 have been added to alternatively define the invention. Entry is requested.

In the outstanding Office Action the examiner has (1) rejected claim 28 as being anticipated by Stutzenberger et al., Kruger, Herbst or Watanabe, (2) rejected claim 29 as being anticipated by Fujiyoshi et al. or Watanabe, and (3) rejected claim 30 as being anticipated by Stutzenberger et al., Rembold et al., Kruger, Herbst, or Albanello et al.

The inventors assert that these rejections are incorrect.

Stutzenberger et al. describe an electro hydraulic valve control device for internal combustion engines in which a tappet volume for operating a valve piston arranged between an actuating cam, operated cam piston and an engine valve can be reduced via a solenoid valve which is arranged in a drain passage (see abstract lines 1 to 6; column 1, line 63 to column 2, line 3; column 5, line 38 to line 48).

Neither Krüger and Herbst disclose variable valve train systems which allow full variable valve lifts, but only shift devices to shift between two defined valve lifts. The shift devices activated with very low working pressure don't enable a hydraulically activated valve lift additionally to a mechanical activated valve lift.

Watanabe (discussed in the specification of the present application) discloses a valve timing control system where an hydraulic valve lifter is provided between a cam and a valve. Via an external pump a preliminary oil pressure is produced in the hydraulic valve lifter. An electromagnetic

relief valve is provided for training the wheel chamber of the valve lifter. This well known lost motion system does not allow any active hydraulic valve lift.

Fujiyoshi et al. disclose a method and apparatus for controlling valve operation in an internal combustion engine. The method comprises the steps of varying the angular phase of the crankshaft and the camshaft to control the timing of the opening of the valve and releasing the force applied by the cam to open the valve while it is being opened to control the timing of the closing of the intake or exhaust valve (see abstract lines 5 to 10).

Rembold et al. show a hydraulic control device for internal combustion engines with a fluid reservoir allocated to a pressure chamber which is arranged between a cam piston actuated by the driving cam and a valve piston, the latter acting in conjunction with the engine valve. The control situation can only ever have an effect when the cam follower, which is just being driven, is actuated via the driving cam so that the requisite working pressure for the control action can arise in the pressure chamber (see column 6, lines 52 to 57).

Albanello et al. disclose also a lost motion system for variable valve actuation similar to Stutzenberger.

Stutzenberger et al., Fujiyoshi et al., Rembold et al. and Albanello et al. disclose only Lost Motion Systems. The valve lift can only be decreased during mechanical valve lift, but not increased. It is not possible to reopen the lifting valve after a mechanical lifting phase

performed by the cam has ceased. Further, it is not possible to activate the lifting valve hydraulically and to provide an additional lift during a mechanical lifting phase performed by the cam in an active manner.

Further, none of the state of art documents disclose a method of operating an internal combustion engine including the steps of alternately mechanically and hydraulically determining lift of subsequent charge exchange processes.

Claim 28 of the present application claims a method of operating an internal combustion engine with a variable valve train for a cam-actuated lifting valve, including the steps of hydraulically activating the lifting valve and providing an additional lift during a mechanical phase performed by the cam.

None of the cited documents discloses such a method, none of the cited documents can perform the method of claim 28 because all cited documents only show and describe lost motion systems, which have been described in the description of the present application.

Claim 29 of the present application claims a method including the step of hydraulically reopening the lifting valve at least once after a mechanical lifting phase performed by the cam has ceased.

Lost motion systems cannot reopen the lifting valve after a mechanical phase performed by the cam has ceased because lost motion systems operate with only a low working pressure which cannot be used to move the valve against the force of the return spring of the lifting valve.

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Claim 30 of the present application claims a method including the steps of alternatingly mechanically and hydraulically determining lifts of subsequent charge exchange processes.

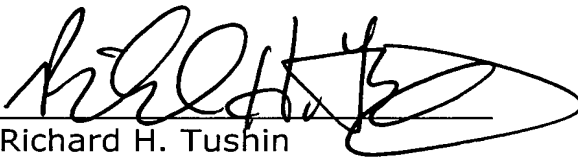
Lost motion systems cannot be used to perform alternatingly mechanically and hydraulically determining lifts, because lost motion systems operate with only a low working pressure which cannot be used to perform hydraulic lifts without a mechanical lift.

Reconsideration and allowance of this application is requested.

Respectfully submitted,

DYKEMA GOSSETT PLLC

By:

  
Richard H. Tushin  
Registration No. 27,297  
Franklin Square, Third Floor West  
1300 I Street, N.W.  
Washington, DC 20005-3353  
(202) 906-8600

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